# THE TRICKLE-DOWN EFFECT OF ACADEMIC MENTORING

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## BACKGROUND

- Mentoring involves a long-term investment on behalf of the mentor and benefits the personal and professional development of a protégé (Allen et al., 2004; Baker & Griffin, 2010).
- This investment is key for undergraduate and graduate students whose research opportunities and potential career development can be positively influenced by relationships with faculty members in their field (Johnson, 2007).
- Even though the benefits of mentoring are widely known, mentoring support continues to be elusive for students in higher education settings, where a large percentage of students have no access to mentoring support (NASEM, 2019).

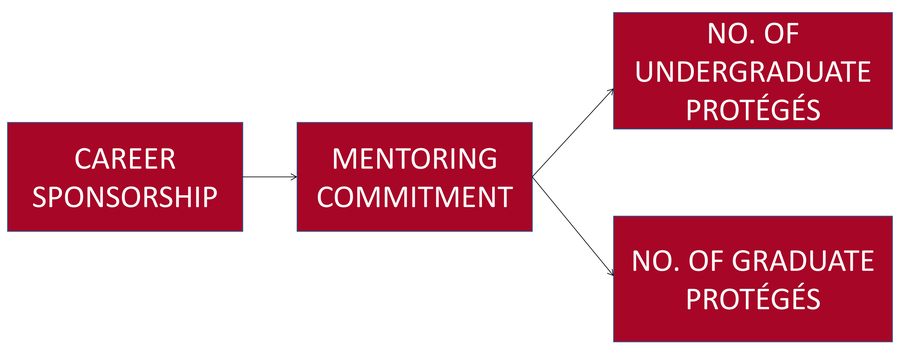
## HYPOTHESES

**1.** Career sponsorship relates positively to mentoring commitment.

**2a & 2b.** Mentoring commitment relates positively to number of undergraduate and graduate protégés.

**3a & 3b.** Career sponsorship has a positive indirect effect on number of undergraduate and graduate protégés.

## CONCEPTUAL MODEL




## METHODS

- N = 255 participants, of which 65.1% were men, 34.9% were women, and 29.4%, 31.4%, and 39.2% were assistant, associate, and full professors, respectively.
- Analyzed using CFA & Hayes PROCESS 4

## RESULTS

- **H1 Supported**: Career Sponsorship and Mentoring Commitment are positively related ($r = .21$, $p < .01$).
- **H2a & H2b Supported**: Mentoring Commitment is positively correlated with both number of undergraduate protégés ($r = .16$, $p < .05$) and number of graduate protégés ($r = .14$, $p < .05$).
- **H3a & H3b Supported**: Career Sponsorship has a positive indirect effect on both number of undergraduate and number of graduate protégés.
- **The results suggest that the relationship between career sponsorship and number of protégés is fully mediated through mentoring commitment.**

## IMPLICATIONS

- The study provided **evidence of the trickle-down effect of mentoring in academia.**
- Increasing overall numbers of protégés may also create a greater number of opportunities for diverse and underrepresented students to receive the benefits of mentorship.

**Table 1.**
**Descriptive Statistics and Correlation Matrix**

| Variable | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1. Discipline | - | - | - | | | | | |
| 2. Rank | - | - | .01 | - | | | | |
| 3. Gender | - | - | .23** | -.14* | - | | | |
| 4. Career Sponsorship | 3.92 | 1.55 | .10 | .02 | .07 | - | | |
| 5. Mentoring Commitment | 4.79 | 1.02 | .06 | .11 | .11 | .21** | - | |
| 6. Undergraduate Students | 2.73 | 2.74 | .01 | -.14* | .13* | -.02 | .16* | - |
| 7. Graduate Students | 3.62 | 2.4 | -.14* | .06 | .01 | .04 | .14* | .18** |

Note. N=255. Gender is coded 0=Man, 1=Woman.
* p < .05, ** p < .01

**Table 2.**
**Regression Results of Direct and Indirect Effects for Number of Undergraduate Protégés.**

| Variable | B | SE | t | p |
|---|---|---|---|---|
| Total and direct effects | | | | |
| Total effect of career sponsorship on undergraduate students | -.05 | .11 | -.41 | .69 |
| Mentoring commitment regressed on career sponsorship | .13 | .04 | 3.19 | .00 |
| Undergraduate students regressed on mentoring commitment, controlling for career sponsorship | .48 | .17 | 2.82 | .01 |
| Undergraduate students regressed on career sponsorship, controlling for mentoring commitment | -.11 | .11 | -.10 | .33 |
| | | | | |
| Bootstrapping results for direct and indirect effect | M | SE | Lower Level 95% CI | Upper Level 95% CI |
| Direct Effect | -.11 | .11 | -.33 | .11 |
| Indirect Effect | .06 | .03 | .01 | .13 |
| Note: Process Model 4. N = 255. | | | | |

**Table 3.**
**Regression Results of Direct and Indirect Effects for Number of Graduate Protégés.**

| Variable | B | SE | t | p |
|---|---|---|---|---|
| Total and direct effects | | | | |
| Total effect of career sponsorship on graduate students | .07 | .10 | .78 | .43 |
| Mentoring commitment regressed on career sponsorship | .13 | .04 | 3.19 | .00 |
| Graduate students regressed on mentoring commitment, controlling for career sponsorship | .33 | .15 | 2.16 | .03 |
| Graduate students regressed on career sponsorship, controlling for mentoring commitment | .03 | .10 | .34 | .73 |
| | | | | |
| Bootstrapping results for direct and indirect effect | M | SE | Lower Level 95% CI | Upper Level 95% CI |
| Direct Effect | .03 | .09 | -.16 | .22 |
| Indirect Effect | .04 | .03 | .00 | .10 |
| Note: Process Model 4. N = 255. | | | | |